

CLAIMS:

1. Method for acquiring a substantially complete depth map from a 3-D scene with the steps of:

a) acquiring partial depth map from said 3-D scene,

b) acquiring derivates of depth information from said scene,

5 c) extending said partial depth map by adding non-relevant information to said partial depth map, creating a pixel dense full depth map being spatially consistent with both said partial depth map and said derivates of depth information.

2. Method according to claim 1, characterized in that said non-relevant
10 information extending said depth map is calculated by maximizing a probability function containing said non-relevant information, said partial depth map and said derivates of said depth map.

3. Method according to claim 1, characterized in that said partial depth
15 information and said derivates of depth information is acquired by quantitative image processing.

4. Method according to claim 1, characterized in that said partial depth
20 information is acquired by detecting a local amount of image texture, and determining depth from spatially high textured areas.

5. Method according to claim 1, characterized in that said partial depth
information and said derivates of depth information is acquired by qualitative image
25 processing.

6. Method according to claim 1, characterized in that said partial depth
information is acquired by object segmentation to determine objects within said image and by
detecting the ordering of objects.

7. Method according to claim 1, characterized in that human depth perception is modeled by depth sensors and that said pixel dense full depth map is calculated based on properties of said depth sensors.

5 8. Method according to claim 1, characterized in that said pixel dense full depth map is calculated by perturbing pixel values not defined by said partial depth map and said derivatives of said depth map and minimizing said probability function.

10. Integrated circuit providing image processing of still and/or motion images
10 according to claim 1.

11. Use of a method according to claim 1 in consumer electronics, television and computer vision products.